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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Tsutomu Nakamura

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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

MAKI, STEVEN D

ART UNIT

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1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/523,970	Applicant(s) NAKAMURA, TSUTOMU	
	Examiner Steven D. Maki	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 8 recite "the angled belt continuously extending from one end to the other end in the width direction". It is unclear what has the "one end" and "the other end" and as such the location of the "one end" and "the other end" is uncertain.

- 3) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- 4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Japan 106 and Great Britain 069

- 5) **Claims 1-2 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 106 (JP 01-109106) in view of Great Britain 069 (GB 2114069).**

Japan 106 discloses a pneumatic radial motorcycle tire comprising a tread portion 1, a belt layer 6, carcass 5 and bead cores 4. The belt layer 6 comprises cross belt plies 7 and a spiral ply 8. The belt plies 7 are disposed on the spiral ply 8 such that the spiral ply 8 is arranged between the belt plies 7 and the carcass 5. The cord angle of the belt plies is 30 degrees to 10 degrees with respect to the circumferential direction. The cord angle of the spiral ply 8 is virtually zero degrees with respect the circumferential direction. The motorcycle tire has improved high speed durability, turning stability and road gripping force. See abstract and figure 1. The width BW of the cross belt 7 is 65-105% of the tread width TW. See figure 1 and page 2 lower left. Japan 106 illustrates the tread having grooves in the cross-section view of figure 1. Japan 106 is silent as to the tread having grooves having a main groove component oriented at an angle of 0-20 degrees with respect to the circumferential direction.

As to claims 1-2 and 6-7, it would have been obvious to one of ordinary skill in the art to provide Japan 106's motorcycle tire with a main groove component oriented at an angle of 0-20 degrees with respect to the circumferential direction in view of Great Britain 069's suggestion to provide a motor cycle tire with isolated long inclined grooves as shown in figure 4 so as to reduce the problem of uneven wear but permit water to escape from the ground contact area. In figure 4 of Great Britain 069, groove part 118 of the long inclined grooves 112, 114 is oriented at 0 degrees to the circumferential direction.

6) Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 106 (JP 01-109106) in view of Great Britain 069 (GB 2114069) as applied above and further in view of Nakamura 415 (US 6,276,415).

As to claim 4, it would have been obvious to one of ordinary skill in the art to provide the long inclined groove suggested by Great Britain 069 with a groove width of 1.5-7.5% tread width since (1) Great Britain 069 teaches forming the long grooves with suitable size (width and length) to obtain the water escape requirement, but reduce uneven wear and (2) Nakamura 415 suggests forming long inclined grooves in a motorcycle tread with a width of 3-15% of the tread width.

7) Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 106 (JP 01-109106) in view of Great Britain 069 (GB 2114069) as applied above and further in view of Nakamura 263 (US 2001/0045263).

As to claim 5, it would have been obvious to one of ordinary skill in the art to provide the cords of the cross belt plies 7 and the spiral ply 8 of Japan 106's motorcycle tire with an initial tensile resistance of not less than 50 cN/cord since Nakamura 263, also directed to a motorcycle tire having a belt layer comprising cross belt plies and a spiral ply, suggests using cords having an initial tensile strength of at least 50 cN/cord for the cross belt plies and the spiral ply to ensure that the tire has the required rigidity to cope with external forces applied from various directions.

8) Claims 8, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 106 (JP 01-109106) in view of Great Britain 069 (GB 2114069) as applied above and further in view of Japan 505 (JP 63-121505).

As to claims 8, 11 and 14, it would have been obvious to use both the claimed grooves A and B since (1) Great Britain 069 teaches using two types of grooves (long inclined grooves 112, 114 and short grooves 122-125 between the inclined long grooves 112, 114) and (2) Japan 505 suggests that short inclined grooves 3-5 in a motorcycle tread may be inclined in a direction opposite that of long inclined grooves (figure 2).

9) Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 106 (JP 01-109106) in view of Great Britain 069 (GB 2114069) and Japan 505 (JP 63-121505) as applied above and further in view of Japan 719 (JP 2001-030719).

As to claim 16, it would have been obvious to one of ordinary skill in the art to provide the tread with a negative ratio of 5-20% since Japan 719 suggests using a negative ratio of 10-25% for a motorcycle having high speed durability without deteriorating drainage and wear resistance.

10) Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 106 (JP 01-109106) in view of Great Britain 069 (GB 2114069) and Japan 505 (JP 63-121505) as applied above and further in view of Nakamura 263 (US 2001/0045263).

As to claim 17, it would have been obvious to one of ordinary skill in the art to provide the cords of the cross belt plies 7 and the spiral ply 8 of Japan 106's motorcycle tire with an initial tensile resistance of not less than 50 cN/cord since Nakamura 263, also directed to a motorcycle tire having a belt layer comprising cross belt plies and a

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spiral ply, suggests using cords having an initial tensile strength of at least 50 cN/cord for the cross belt plies and the spiral ply to ensure that the tire has the required rigidity to cope with external forces applied from various directions.

Japan 106 and Nakagawa et al

11) Claims 1-3, 6-8, 10-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 106 (JP 01-109106) in view of Nakagawa et al (US 6,220,320).

Japan 106 discloses a pneumatic radial motorcycle tire comprising a tread portion 1, a belt layer 6, carcass 5 and bead cores 4. The belt layer 6 comprises cross belt plies 7 and a spiral ply 8. The belt plies 7 are disposed on the spiral ply 8 such that the spiral ply 8 is arranged between the belt plies 7 and the carcass 5. The cord angle of the belt plies is 30 degrees to 10 degrees with respect to the circumferential direction. The cord angle of the spiral ply 8 is virtually zero degrees with respect the circumferential direction. The motorcycle tire has improved high speed durability, turning stability and road gripping force. See abstract and figure 1. The width BW of the cross belt 7 is 65-105% of the tread width TW. See figure 1 and page 2 lower left. Japan 106 illustrates the tread having grooves in the cross-section view of figure 1. Japan 106 is silent as to the tread having grooves having a main groove component oriented at an angle of 0-20 degrees with respect to the circumferential direction.

As to claims 1-3, 6-8, 10-13 and 15, it would have been obvious to one of ordinary skill in the art to provide Japan 106's motorcycle tire with a main groove component oriented at an angle of 0-20 degrees with respect to the circumferential

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direction in view of Nakagawa et al's suggestion to form grooves in a tread of a motorcycle tire as shown in figure 1 to improve lateral stiffness so as to improve steering stability. The claimed "main groove component oriented at an angle of 0-20 degrees" (claim 1) or "groove C" (claim 8) reads on the circumferential groove 4, which Nakagawa et al teaches may extend zigzag or straight (col. 3 lines 33-36). As to claim 8, the claimed groove A read on one the grooves 3a and 3b and the claimed groove B reads on the other groove of grooves 3a and 3b. Nakagawa et al teaches that groove 3a is oriented at 20-70 (40-60) degrees with respect to the circumferential direction in one direction whereas groove 3b is oriented at 20-70 (40-60) degrees with respect to the circumferential direction in the opposite direction. As to claim 10, the claimed relative lengths and areas of grooves A and B would have been obvious and could have been determined without undue experimentation in view of Nakagawa et al's teaching to connect grooves 3a and 3b at mid bending point P and to form groove 3a inclined at angle alpha and groove 3b inclined at angle beta according to a pitch DP, which is 1-20% of the circumferential length of the tire.

12) Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 106 (JP 01-109106) in view of Nakagawa et al (US 6,220,320) as applied above and further in view of Japan 307 (JP 63-315307).

As to claims 4 and 9, it would have been obvious to one of ordinary skill in the art to provide the grooves with a width of 1.5-7.5% tread width since (1) Nakagawa et al teaches using a groove width of $1/25$ to $1/1$ pitch DP and pitch DP = $1/100$ to $1/20$ circumferential length of the tire and (2) Japan 307, also directed to a tire tread for a

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motorcycle, discloses an example tread width TW = 176 mm, pitch P = 190 mm and circumferential length of tire = 1900 mm (page 3 left column).

13) Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 106 (JP 01-109106) in view of Nakagawa et al (US 6,220,320) as applied above and further in view of Japan 719 (JP 2001-030719).

As to claim 16, it would have been obvious to one of ordinary skill in the art to provide the tread with a negative ratio of 5-20% since Japan 719 suggests using a negative ratio of 10-25% for a motorcycle having high speed durability without deteriorating drainage and wear resistance.

14) Claims 5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 106 (JP 01-109106) in view of Nakagawa et al (US 6,220,320) as applied above and further in view of Nakamura 263 (US 2001/0045263).

As to claims 5 and 17, it would have been obvious to one of ordinary skill in the art to provide the cords of the cross belt plies 7 and the spiral ply 8 of Japan 106's motorcycle tire with an initial tensile resistance of not less than 50 cN/cord since Nakamura 263, also directed to a motorcycle tire having a belt layer comprising cross belt plies and a spiral ply, suggests using cords having an initial tensile strength of at least 50 cN/cord for the cross belt plies and the spiral ply to ensure that the tire has the required rigidity to cope with external forces applied from various directions.

Japan 106 and Japan 105

15) Claims 1-3, 6-8, 10-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 106 (JP 01-109106) in view of Japan 105 (JP 63-212105).

Japan 106 discloses a pneumatic radial motorcycle tire comprising a tread portion 1, a belt layer 6, carcass 5 and bead cores 4. The belt layer 6 comprises cross belt plies 7 and a spiral ply 8. The belt plies 7 are disposed on the spiral ply 8 such that the spiral ply 8 is arranged between the belt plies 7 and the carcass 5. The cord angle of the belt plies is 30 degrees to 10 degrees with respect to the circumferential direction. The cord angle of the spiral ply 8 is virtually zero degrees with respect the circumferential direction. The motorcycle tire has improved high speed durability, turning stability and road gripping force. See abstract and figure 1. The width BW of the cross belt 7 is 65-105% of the tread width TW. See figure 1 and page 2 lower left. Japan 106 illustrates the tread having grooves in the cross-section view of figure 1. Japan 106 is silent as to the tread having grooves having a main groove component oriented at an angle of 0-20 degrees with respect to the circumferential direction.

As to claims 1-3, 6-8, 10-13 and 15, it would have been obvious to one of ordinary skill in the art to provide Japan 106's motorcycle tire with a main groove component oriented at an angle of 0-20 degrees with respect to the circumferential direction in view of Japan 105's suggestion to form grooves as shown in figure 1 to improve drive stability and wet property during turning wherein groove part 2c (one of groove A or groove B) is inclined at an angle theta of 30-60 degrees and groove 3 (other of groove A and groove B) is perpendicular to the groove part 2c. The claimed groove C reads on the circumferential groove C or groove part 2a inclined at angle alpha of 5-20 degrees to the circumferential direction.

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16) Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 106 (JP 01-109106) in view of Japan 105 (JP 63-212105) as applied above and further in view of Nakamura 415 (US 6,276,415).

As to claim 4, it would have been obvious to one of ordinary skill in the art to provide the inclined grooves suggested by Japan 105 with a groove width of 1.5-7.5% tread width since Nakamura 415 suggests forming long inclined grooves in a motorcycle tread with a width of 3-15% of the tread width.

17) Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 106 (JP 01-109106) in view of Japan 105 (JP 63-212105) as applied above and further in view of Japan 719 (JP 2001-030719).

As to claim 16, it would have been obvious to one of ordinary skill in the art to provide the tread with a negative ratio of 5-20% since Japan 719 suggests using a negative ratio of 10-25% for a motorcycle having high speed durability without deteriorating drainage and wear resistance.

18) Claims 5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 106 (JP 01-109106) in view of Japan 105 (JP 63-212105) as applied above and further in view of Nakamura 263 (US 2001/0045263).

As to claims 5 and 17, it would have been obvious to one of ordinary skill in the art to provide the cords of the cross belt plies 7 and the spiral ply 8 of Japan 106's motorcycle tire with an initial tensile resistance of not less than 50 cN/cord since Nakamura 263, also directed to a motorcycle tire having a belt layer comprising cross belt plies and a spiral ply, suggests using cords having an initial tensile strength of at

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least 50 cN/cord for the cross belt plies and the spiral ply to ensure that the tire has the required rigidity to cope with external forces applied from various directions.

Remarks

19) Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Clauzade et al (US 6,609,551), Suzuki et al (US 5,385,193) and Delias (US 5,301,730) are cited of interest.

20) No claim is allowed.

21) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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22) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/
Primary Examiner, Art Unit 1791

Steven D. Maki
April 14, 2008